

- + Our **product category house connection systems** fulfils the builders and suppliers need for **convenient, simple and tight solutions for the connection of supply lines** like electricity, water, gas, telecommunication and district heating.
- + The **KRASO® Builder's Convenience Box - floor** - offers the growing number of builders that forgo basements a **water pressure and gas-tight house connection as complete solution for connecting supply lines in a 90° angle**, right from the street into the building. **The compact box with DVGW certificate** is suitable for most network operators, **easy and stable to mount and height-adjustable**. A external hose diameter is now 90 mm, internal 80 mm! Including extension set! Resistant to methanol!
- + Building for the future! The **KRASO® Builder's Convenience Box - floor - 5-fold** with additional empty system and 10 meters **KRASO® Flexible Empty Pipe System FLS** keeps all possibilities open!
- + For buildings with basement - the **KRASO® Builder's Convenience Box - wall**: installation of gas, water, electricity and telecommunication lines into basements with our new multi house connection system! **DVGW - certified according VP 601**: overall system is gas- and water pressure tight up to 1 bar! **External sealing element with 80 mm seal and flange according DIN 18533!** Resistant to methane gas! Radon-tight!
- + Local, district or geothermal heating - this type of heating has some advantages: cost-effective, low-maintenance, space-saving and a better carbon footprint. To be able to install local, district or geothermal heating lines securely into buildings we developed the **KRASO® Local and District Heating House Connection** for buildings without basement and the **KRASO® Builder's Convenience Box - wall - NFE** for buildings with basement. For all usual, flexible and pre-insulated pipes with integrated supply and reflux.



House Connection Systems

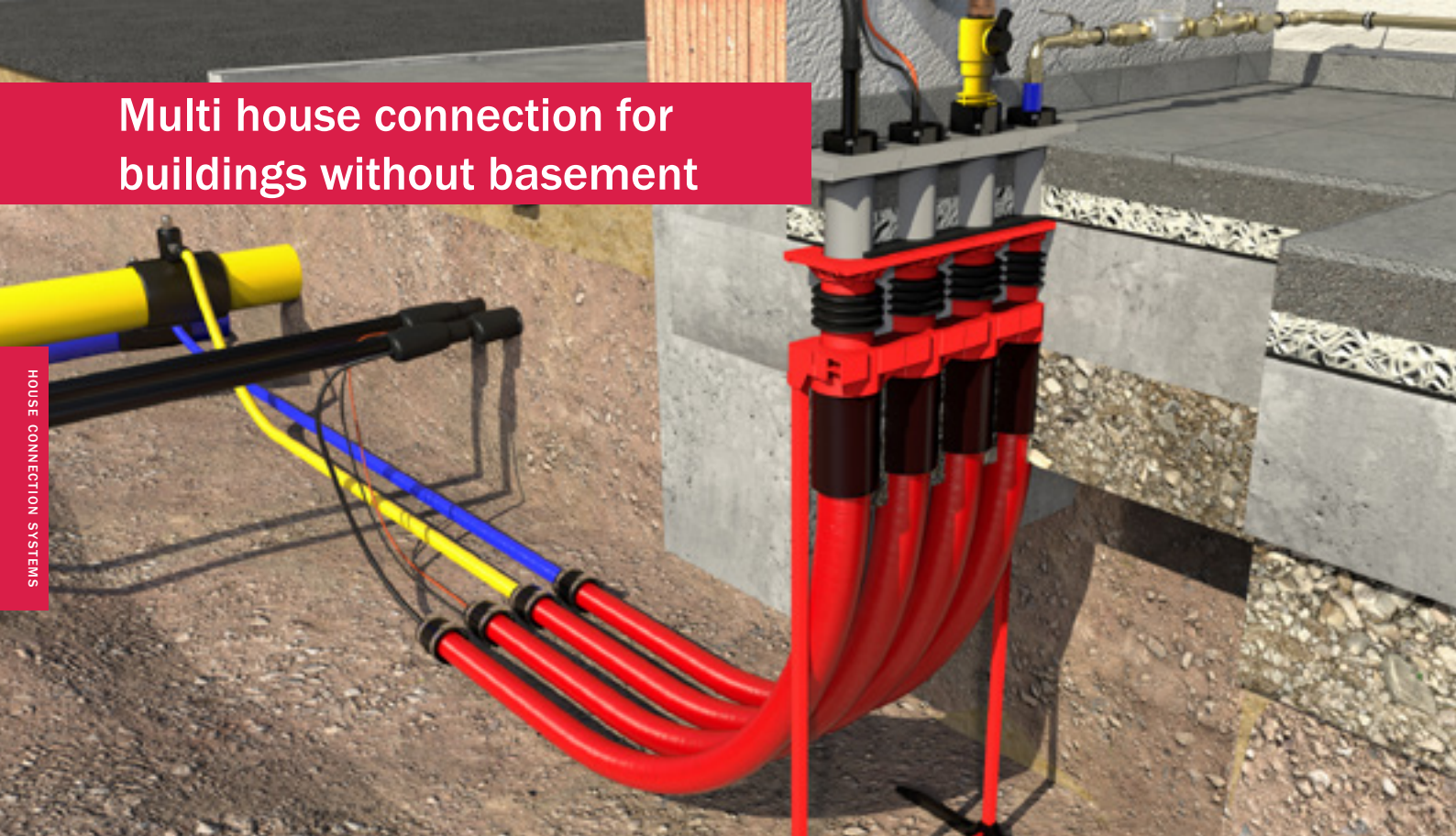


BKP - floor
 BKP - floor - 110
 BKP - floor - NFE
 BKP - wall
 BKP - wall - NFE
 BKP - wall - ESH
 BKP - wall - SWP
 BKP gas installation kit

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Multi house connection for buildings without basement

HOUSE CONNECTION SYSTEMS



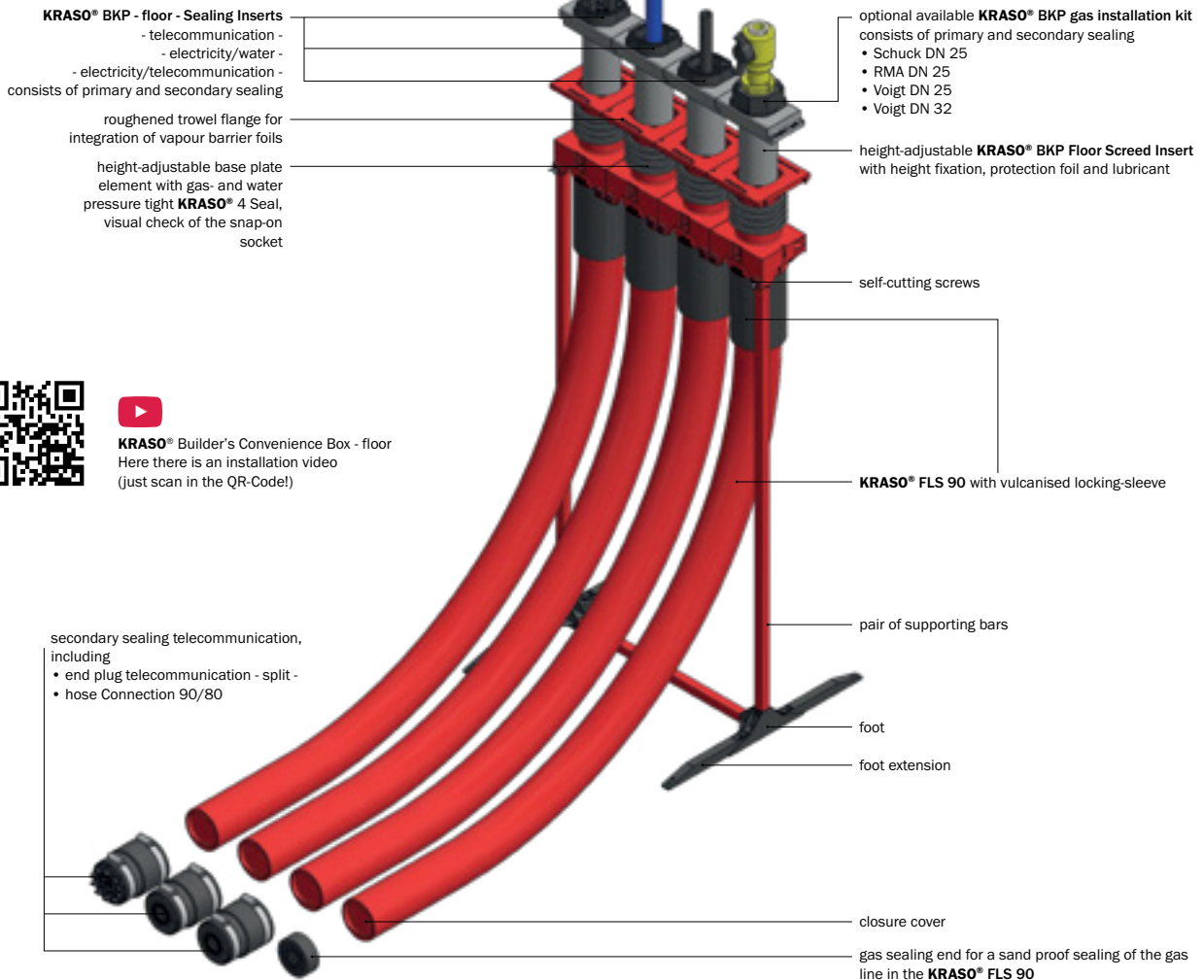
KRASO® Builder's Convenience Box - floor

The multi house connection for gas, water, electricity, telecommunication

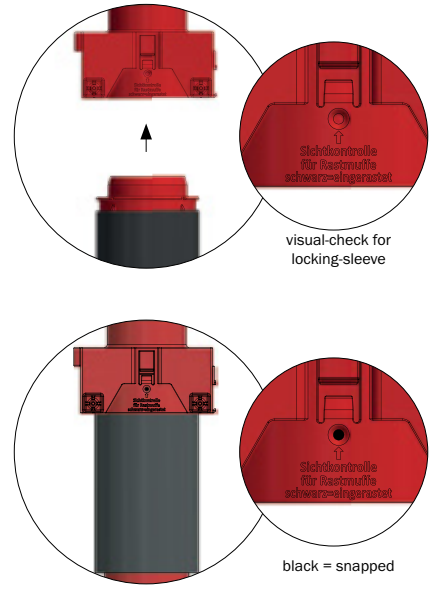
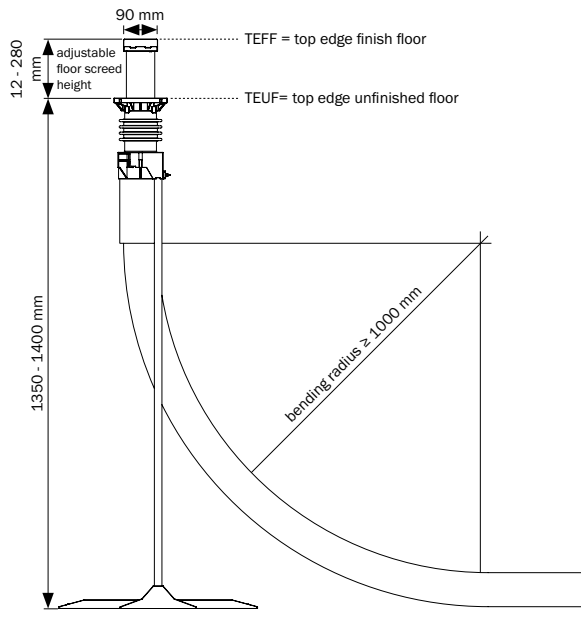
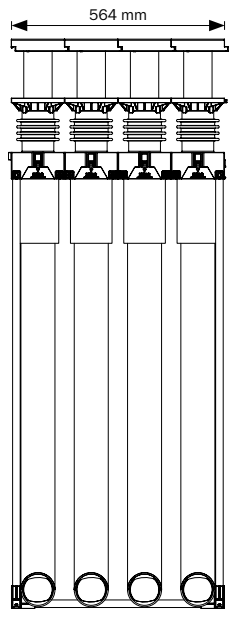
larger internal diameter:
now 80 mm!

- + The convenient solution for builders: **safe and tight for the installation of gas, water, electricity and telecommunication lines into buildings without basement!**
- + • DVGW - certified according VP 601: overall system is gas- and water pressure tight up to 1 bar!
- + • Gas- and odour-tight - high-quality according TA-Air!
- + • Radon-tight! Resistant to methane gas!
- + • KRASO® 4 Seal: exterior sealing of concrete: 10 bar!
Overall system is gas- and water pressure tight up to 1 bar!
- + **Simple installation** due to stable installation device and visual check of the snap-on socket - helps to avoid installation errors!
- + Hose diameter: **external 90 mm - internal 80 mm!**
- + For flush-mount installation in the base plate - **no tripping hazards, no wall damages! Including building period installation cover.**
- + **Easy integration of vapour barrier foils** due to the roughened trowel flange!
- + **Height-adjustable** base plate as well as floor screed.
- + **Optional available BKP gas installation kits:**
 - gas house connection Schuck DN 25
 - gas house connection RMA DN 25
 - gas house connection Voigt DN 25
 - gas house connection Voigt DN 32
- + Split end plug for **easy installation!**
- + **Including extension set!**
- + **DafStB waterproof concrete guideline: Stress class 1 + 2, DIN 18533 W1.1 -E**





KRASO® Builder's Convenience Box - floor
 Here there is an installation video (just scan in the QR-Code!)



KRASO® BKP - floor - extension set

as an extension for the Flexible Empty Pipe System **KRASO® FLS 90** with on site provided cable protective hose, including 2 x shrink hoses 95/25 and 1 x adapter tubes DN 90 with protective cover. Included in all **KRASO® Builder's Convenience Boxes - floor!**





KRASO® Builder's Convenience Box - floor **LG 5**

KRASO® Builder's Convenience Box (BKP) - floor, multi house connection for supply lines (gas, water, electricity, telecommunication) for buildings without basement incl. **KRASO®** FLS 90, incl. installation sets for electricity/water (2 x), telecommunication, electricity + telecommunication as standard configuration for **KRASO®** BKP - floor - 4-fold, desired configuration for **KRASO®** BKP - floor - 3-fold, 2-fold, single, **KRASO®** BKP gas installation kits are available as an option
 | DafStB waterproof concrete guideline: Stress class 1 + 2, DIN 18533 W1.1 - E

Type / Item	KRASO® BKP - floor			
Height-adjustable to TEUF** in mm from ... to ...	1350 - 1400			
Height-adjustable to TEFF* in mm from ... to ...	12 - 280			
Bending radius in mm	≥ 1000			
Dimensions floor screed insert wiping edge in mm	564 x 90	423 x 90	284 x 90	141 x 90

Type / Item	KRASO® BKP - floor - 4-fold			
incl. KRASO® FLS 90	4 x 3 meter	4 x 6 meter	4 x 9 meter	4 x 12 meter
KRASO® BKP - floor - 4-fold	944 €	1.172 €	1.400 €	1.628 €

Type / Item	KRASO® BKP - floor - 3-fold			
incl. KRASO® FLS 90	3 x 3 meter	3 x 6 meter	3 x 9 meter	3 x 12 meter
KRASO® BKP - floor - 3-fold	818 €	989 €	1.160 €	1.331 €

Type / Item	KRASO® BKP - floor - 2-fold			
incl. KRASO® FLS 90	2 x 3 meter	2 x 6 meter	2 x 9 meter	2 x 12 meter
KRASO® BKP - floor - 2-fold	542 €	656 €	770 €	884 €

Type / Item	KRASO® BKP - floor - 1-fold			
incl. KRASO® FLS 90	1 x 3 meter	1 x 6 meter	1 x 9 meter	1 x 12 meter
KRASO® BKP - floor - 1-fold	396 €	453 €	510 €	567 €

Scope of supply: the following details are for the **KRASO®** Builder's Convenience Box - floor - 4-fold with **KRASO®** FLS 90 (3 meter), bei anderen differing scope of supply for other designs (3-fold, 2-fold, 1-fold).

- foot
- foot extension
- pair of supporting bars
- height-adjustable base plate element 4-fold with gas- and water pressure tight **KRASO®** 4 Seal, trowel flange, visual check of the snap-on socket and pre-installed building period installation cover
- 4 x Flexible Empty Pipe System **KRASO®** FLS 90 (3 meters) with vulcanised locking-sleeve and closure cover
- height-adjustable **KRASO®** BKP Floor Screed Insert with protection cover and lubricant
- height fixation for **KRASO®** BKP Floor Screed Insert (2 pcs.)
- installation instructions **KRASO®** Builder's Convenience Box - floor
- folding rule
- **KRASO®** BKP - floor - extension set including
 - 8 x shrink hose 95/25
 - 4 x adapter tube DN 90 with protective cover
- Installation kit including
 - **KRASO®** BKP - Sealing Insert - electricity/water - 2 pieces with stepless ring technology 26 - 50 mm or blind
 - primary sealing + secondary sealing for electricity/water
 - casing pipe end plugs consisting of
 - end plugs for electricity/water - split -
 - hose connection 90/80

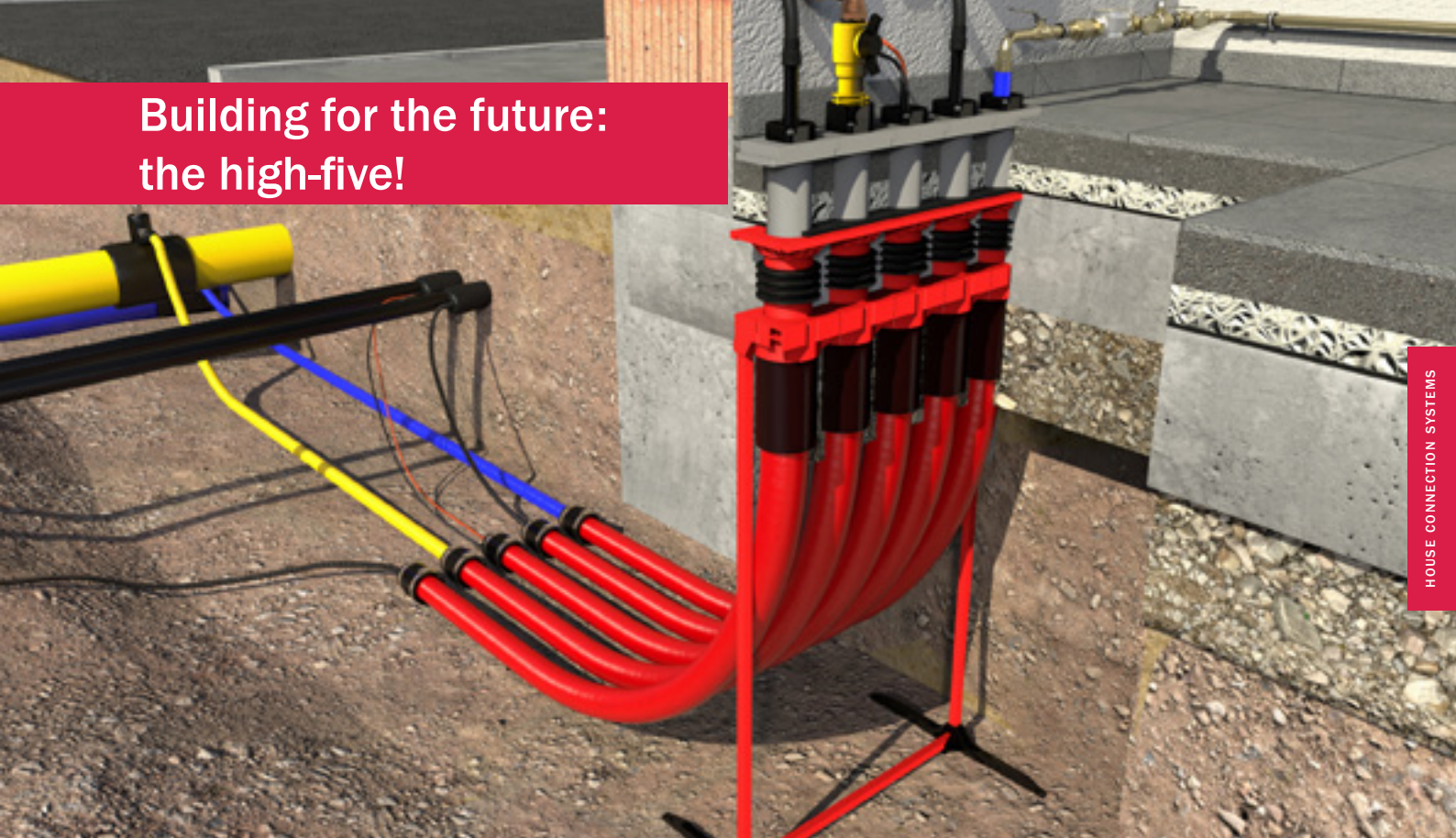
- **KRASO®** BKP - Sealing Insert - telecommunication - clamping range: 5 - 13 mm, 3 x 7 - 13 mm, 13 - 21 mm
 - primary sealing + secondary sealing for telecommunication
 - casing pipe end plugs consisting of
 - end plugs for telecommunication - split -
 - hose connection 90/80
- **KRASO®** BKP - Sealing Insert - electricity + telecommunication - clamping range: electricity 25 - 36 mm / telecommunication 2 x 5 - 10 mm, 3 x 7 - 14 mm
 - primary sealing + secondary sealing for electricity + telecommunication
 - casing pipe end plugs consisting of
 - end plugs for electricity + telecommunication
 - hose connection 90/80
 - tube of lubricant

optional available **KRASO®** BKP gas installation kits:

- **Schuck DN 25** consists of primary and secondary sealing as well as gas end plug
- **RMA DN 25** consists of primary and secondary sealing as well as gas end plug
- **Voigt DN 25** consists of primary and secondary sealing as well as gas end plug
- **Voigt DN 32** consists of primary and secondary sealing as well as gas end plug

* TEUF = top edge unfinished floor, ** TEFF = top edge finished floor

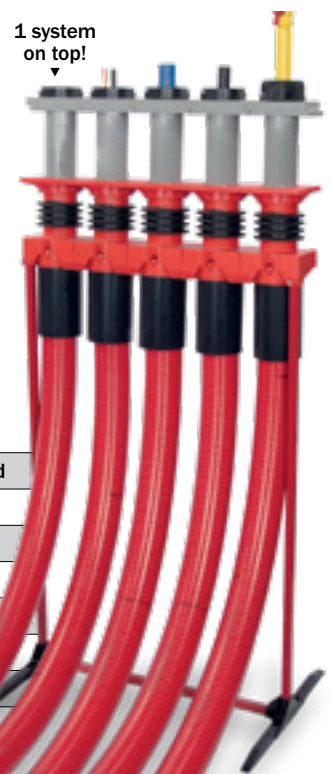
Building for the future:
the high-five!



KRASO® Builder's Convenience Box - floor - 5-fold

Building for the future: 10 meters empty pipe + 1 system on top

- + Builders build for the future! Be prepared for future projects and developments with a fifth system and 10 meters empty pipe system!
- + With an empty pipe system installed to the property boundary, you can save both costs and time regarding excavation and digging work on your own property in the event of future retrofitting or improving connections. The KRASO® Builder's Convenience Box - floor - 5-fold contains 10 metres of KRASO® FLS 90 for each section!
- + DafStB waterproof concrete guideline: Stress class 1 + 2, DIN 18533 W1.1 -E



KRASO® Builder's Convenience Box - floor - 5-fold **LG 5**

KRASO® Builder's Convenience Box (BKP) - floor, multi house connection for supply lines (gas, water, electricity, telecommunication) for buildings without basement incl. KRASO® FLS 90, incl. installation sets for electricity/water (3 x), telecommunication, electricity + telecommunication as standard configuration for KRASO® BKP - floor - 5-fold, KRASO® BKP gas installation kits are available as an option
| DafStB waterproof concrete guideline: Stress class 1 + 2, DIN 18533 W1.1 -E

Type / Item	KRASO® BKP - floor - 5-fold
Height-adjustable to TEUF* in mm from ... to ...	1350 - 1400
Height-adjustable to TEFF** in mm from ... to ...	12 - 280
Bending radius in mm	≥ 1000
Dimensions floor screed insert wiping edge in mm	705 x 90
incl. KRASO® FLS 90	5 x 10 meter
electricity/water (3 x), telecommunication, electricity + telecommunication	1.595 €

Scope of supply: Like KRASO® Builder's Convenience Box - floor, but with additional KRASO® BKP - Sealing Insert - electricity/water -, 5 x Flexible Empty Pipe System KRASO® FLS 90 (10 meter)

◀ 10 meters empty pipe up to the street - no more digging!

Single house connection for buildings without basement



WU
1+2

W1.1-E



KRASO® Builder's Convenience Box - floor - 110

The flexible house connection for heat pumps, local, district or geothermal heating, gas, water, or electricity.

- + The secure house connection for heat pumps for buildings without basement:
 - KRASO® Builder's Convenience Box - floor - 110 for water-water-heat pump and brine-water-heat pump (probe and collector).
 - KRASO® Builder's Convenience Box - floor - 110 - SWP for air-water-heat pump (split).
- + Flexible: Can also be used for configuring with local, district or geothermal piping systems, gas, water or electricity up to DN 50.
- + With water pressure tight, surrounding KRASO® 4 Seal: exterior sealing of concrete: 10 bar!
- + Radon tight!
- + Hose diameter: external 110 mm - internal 100 mm!
- + Stable installation device with foot extension for a save position and an easy installation.
- + For flush-mount installation in the base plate – no tripping hazards, no wall damages! Including building period installation cover.
- + Incl. empty pipe insert (25 cm, internal diameter: 100 mm) for a flexible floor construction.
- + Incl. felxible empty pipe system KRASO® FLS 110 (internal diameter: 100 mm): bending radius 1000 mm. Incl. hose adapter 110 and end plug.
- + DafStB waterproof concrete guideline: Stress class 1 + 2, DIN 18533 W1.1 -E

KRASO® Builder's Convenience Box - floor - 110

With KRASO® Sealing Insert Universal 100 DD with large flange for internal fitting of the pipeline.

Scope:

- 18 – 65 mm or blind

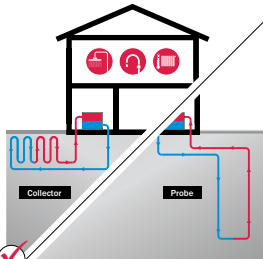
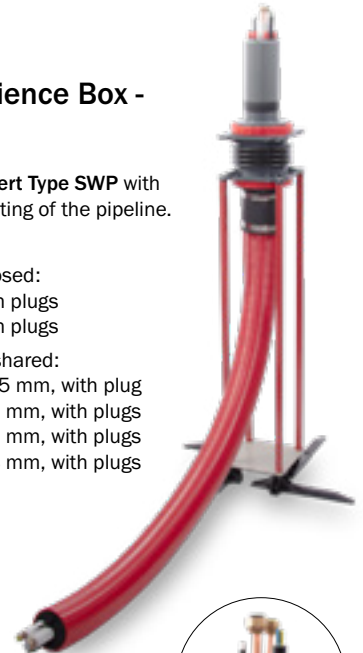


KRASO® Builder's Convenience Box - floor - 110 - SWP

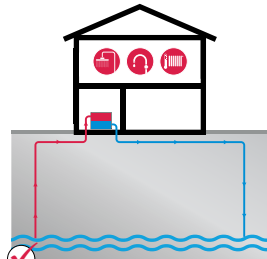
With KRASO® Sealing Insert Type SWP with large flange for internal fitting of the pipeline.

Scope:

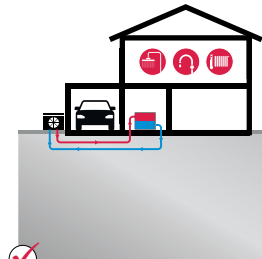
- For control cables, closed:
2 x 5 - 10 mm, with plugs
2 x 11 - 16 mm, with plugs
- For refrigerant lines, shared:
1 x 1/4 inch / 6.35 mm, with plug
1 x 3/8 inch / 9.52 mm, with plugs
1 x 1/2 inch / 12.7 mm, with plugs
1 x 5/8 inch / 15.88 mm, with plugs



Brine-to-water heat pump
- collector - / - probe -



Water to water heat pump



Air to water heat pump
- split -

incl. empty conduit set (25 cm,
internal diameter: 100 mm)



KRASO® Builder's Convenience Box - floor - 110 **LG 5**

(including installation set)

KRASO® Builder's Convenience Box (BKP) - floor - 110 - 1-fold, single house connection for supply lines (heat pump, local/district/geothermal heating, gas, water or electricity) for buildings without a basement, incl. **KRASO®** FLS 110.
| DafStB waterproof concrete guideline: Stress class 1 + 2, DIN 18533 W1.1 -E

Type / Item	KRASO® BKP - floor - 110 / KRASO® BKP - floor - 110 - SWP			
Height to TEUF* in mm	approx. 1185			
Height-adjustable to TEFF** in mm to max.	approx. 1435			
Bending radius in mm	1000			
incl. KRASO® FLS 110	3 meter	6 meter	9 meter	12 meter
KRASO® BKP - floor - 110	701 €	797 €	892 €	988 €
KRASO® BKP - floor - 110 - SWP	735 €	831 €	927 €	1.022 €

Scope of supply: Stable installation device with foot extension, wall penetration for installation that is flush with the base plate, flexible empty pipe system **KRASO®** FLS 110 (internal diameter: 100 mm, radius: 1000 mm, incl. hose connector 110, installation set consisting of: empty conduit set ID 100, approx. 25 cm, **KRASO®** Sealing Insert Universal 100 DD with large flange, end plugs FLS 110 Universal or **KRASO®** Sealing Insert Type SWP with large flange, end plugs

KRASO® Builder's Convenience Box - floor - 110
also available as multi house connection!



Single house connection for buildings without basement



WU
1+2

W1.1-E

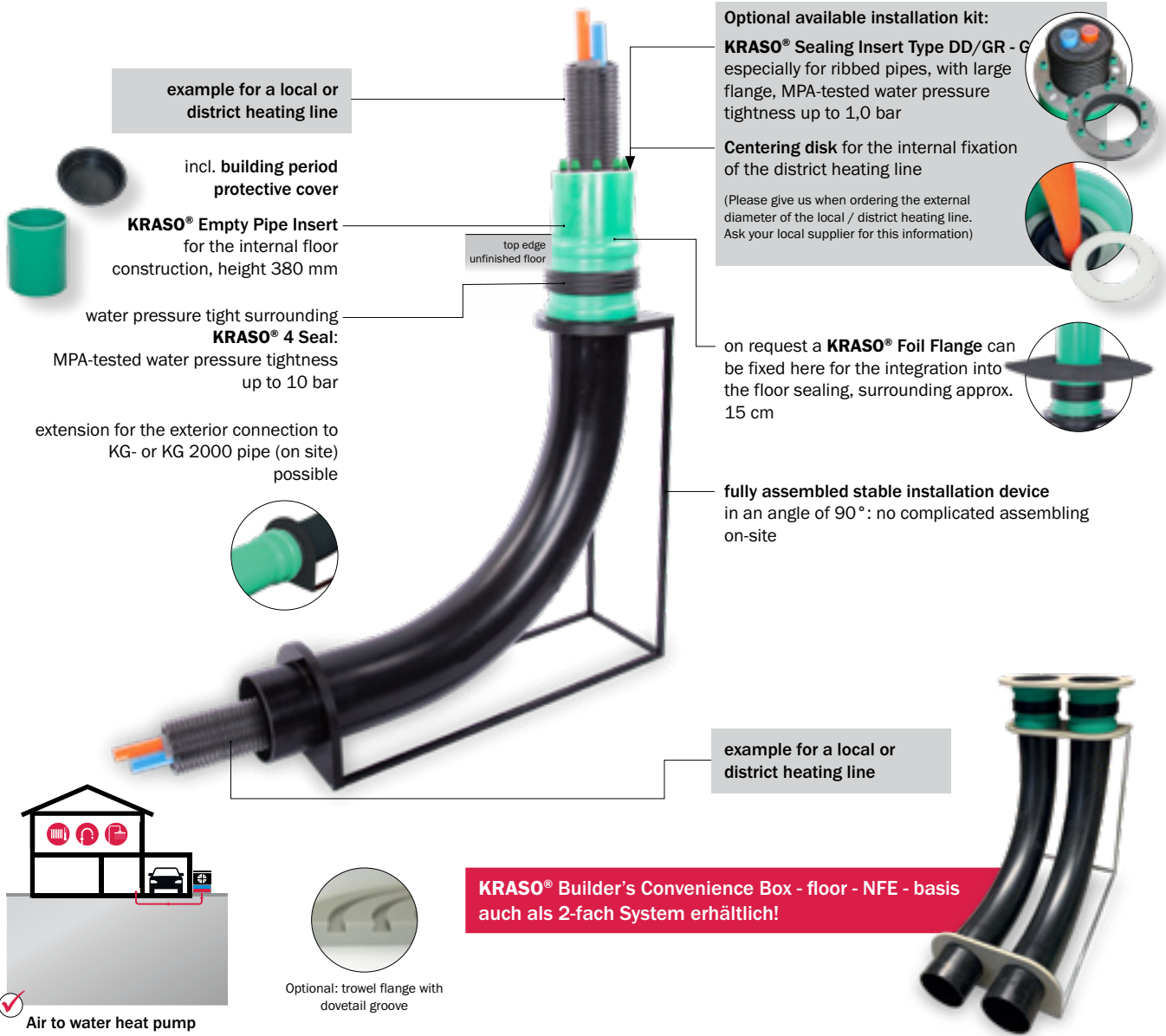


KRASO® Builder's Convenience Box - floor - NFE - basis

Simple, comfortable, tight to the heat pump or to the local, district and geothermal energy network

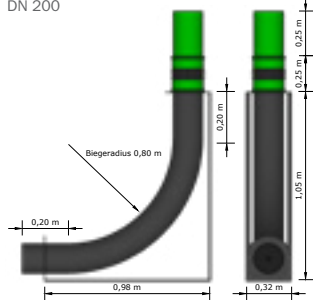
- + The **comfortable solution** for the connection to air-water-heat pump (monobloc) or the to local, district and geothermal energy network – for flexible and insulated pipelines **with integrated supply and reflux**.
- + Fully assembled stable installation device: **positioning - arrangement - concreting - connection - ready!**
- + **For buildings without basement:** single-/multi-family houses, public and commercial buildings.
- + On request also available with **KRASO® Foil Flange** - for the integration into the floor sealing.
- + **KRASO® Builder's Convenience Box - floor - NFE - basis** including:
 - **KRASO® Builder's Convenience Box - floor - NFE - basis DN 200, DN 250 or DN 315** with water pressure tight surrounding **KRASO® 4 Seal**.
 - **KRASO® Empty Pipe Insert KG 2000:** for the internal floor construction.
 - Building period protective cover.
- + **DafStB waterproof concrete guideline: Stress class 1 + 2, DIN 18533 W1.1-E**



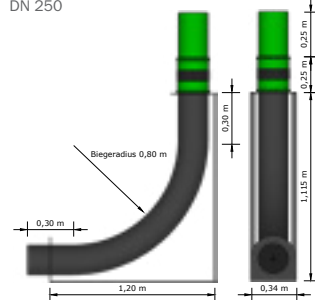


KRASO® Builder's Convenience Box - floor - NFE - basis
auch als 2-fach System erhältlich!

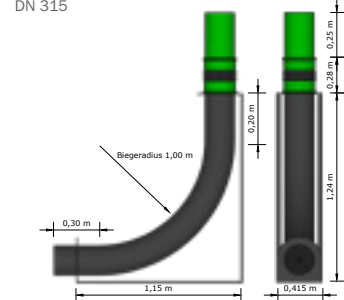
KRASO® Builder's Convenience Box - floor - NFE - basis
DN 200



KRASO® Builder's Convenience Box - floor - NFE - basis
DN 250



KRASO® Builder's Convenience Box - floor - NFE - basis
DN 315



KRASO® Builder's Convenience Box - floor - NFE - basis LG 5

for the connection to the local, district and geothermal energy network - for flexible and insulated pipelines with integrated supply and reflux. For buildings without basement to connect the in-house system to the local and district heating network. With water pressure tight surrounding KRASO® 4 Seal, fully assembled stable installation device and building period protective cover, optional available: KRASO® Foil Flange for the integration into the floor sealing | DafStB waterproof concrete guideline: Stress class 1 + 2, DIN 18533 W1.1 - E

Type / Item	KRASO® BKP - floor - NFE - basis		
Diameter DN	DN 200	DN 250	DN 315
KRASO® BKP - floor - NFE - basis	887 €	962 €	1.120 €
KRASO® Foil Flange (optional available)	230 €	300 €	388 €
Installation kit (optional available)	275 €	329 €	421 €

Scope of supply: KRASO® Builder's Convenience Box - floor - NFE - basis with installation device, empty pipe insert and building period protective cover - optional available: KRASO® Foil Flange, installation kit incl. KRASO® Sealing Insert Type DD/GR - GF and centering disk

Two-fold version on request!



KRASO® BKP - floor - 1-fold



KRASO® BKP - floor - 2-fold







KRASO® BKP - floor - 3-fold



KRASO® BKP - floor - NFE - basis - 2-fold



?

Building without basement	KRASO® Builder's Convenience Box																			
	- floor	- floor - 110 -	- floor - 110 - SWP	- floor - NFE - basis																
available as a single-house connection system	✓	✓	✓	✓																
available as a multi-house connection system	✓	✓	✓	✓																
Gas	✓	✓	-	-																
Water	✓	✓	-	-																
Electricity	✓	✓	-	-																
Telecommunication	✓	✓	-	-																
Local/geothermal/district heating	-	✓	-	✓																
Heat pump	-	✓	✓	✓																
DVGW approved in accordance with VP 601: Whole system that is gas and water pressure-tight up to 1 bar!	✓	-	-	-																
KRASO® 4 Seal: Exterior sealing of concrete: 10 bar!	✓	✓	✓	✓																
Gas- and odour-tight - high-quality in terms of TA-Air!	✓	✓	✓	-																
Radon-tight as tested by the IAF																				
Waterproof concrete guideline / DIN 18533	<table border="1"><tr><th>WU</th><th>W1.1 - E</th></tr><tr><td>1+2</td><td></td></tr></table>	WU	W1.1 - E	1+2		<table border="1"><tr><th>WU</th><th>W1.1 - E</th></tr><tr><td>1+2</td><td></td></tr></table>	WU	W1.1 - E	1+2		<table border="1"><tr><th>WU</th><th>W1.1 - E</th></tr><tr><td>1+2</td><td></td></tr></table>	WU	W1.1 - E	1+2		<table border="1"><tr><th>WU</th><th>W1.1 - E</th></tr><tr><td>1+2</td><td></td></tr></table>	WU	W1.1 - E	1+2	
WU	W1.1 - E																			
1+2																				
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1+2																				
WU	W1.1 - E																			
1+2																				
WU	W1.1 - E																			
1+2																				
External/Internal diameter of KRASO® FLS in mm or nominal size of arc (- floor - NFE)	90/80	110/100	110/100	DN 200 DN 250 DN 315																
Bending radius in mm	≥ 1000	≥ 1000	≥ 1000	800 (DN 200) 800 (DN 250) 1000 (DN 315)																
Height up to TEUF in mm	1350 - 1400 (adjustable)	approx. 1185	approx. 1185	1300 (DN 200) 1365 (DN 250) 1490 (DN 315)																
height-adjustable to TEFF in mm from ... to ... or height to TEUF in mm	12 - 280 (adjustable)	approx. 1435	approx. 1435	0 - 250 (to be shortened on site)																
Installation set	✓	✓	✓	optional																
Scope of KRASO® BKP - Sealing Insert - electricity/water	26 - 50 mm or blind	-	-	-																
Scope of KRASO® BKP - Sealing Insert - telecommunication	5 - 13 mm 3 x 7 - 13 mm 13 - 21 mm	-	-	-																
Scope of KRASO® BKP - Sealing Insert - electricity + telecommunication	Electricity 25 - 36 mm Telecommunication 2 x 5 - 10 mm 3 x 7 - 14 mm	-	-	-																
Scope of KRASO® Sealing Insert Universal 100 DD with large flange	-	18 - 65 mm or blind	-	-																
Scope of KRASO® Sealing Insert Type SWP with large flange	-	-	For control cables, closed, with plugs: 2 x 5 - 10 mm 2 x 11 - 16 mm For refrigerant lines, shared, with plugs: 1x 1/4 inch / 6.35 mm 1x 3/8 inch / 9.52 mm 1x 1/2 inch / 12.7 mm 1x 5/8 inch / 15.88 mm	-																
Scope of KRASO® Sealing Insert Type DD/GR with large flange*	-	-	-	0 - 155 mm (DN 200) 0 - 201 mm (DN 250) 0 - 262 mm (DN 315)																
optionally available KRASO® BKP gas installation kits	• Schuck DN 25 • RMA DN 25 • Voigt DN 25 • Voigt DN 32	-	-	-																

* Scope of sealing insert, when choosing the house connection, take the bending radius (media line) into account. Material and rigidity vary between manufacturers.

Multi house connection for buildings with basement



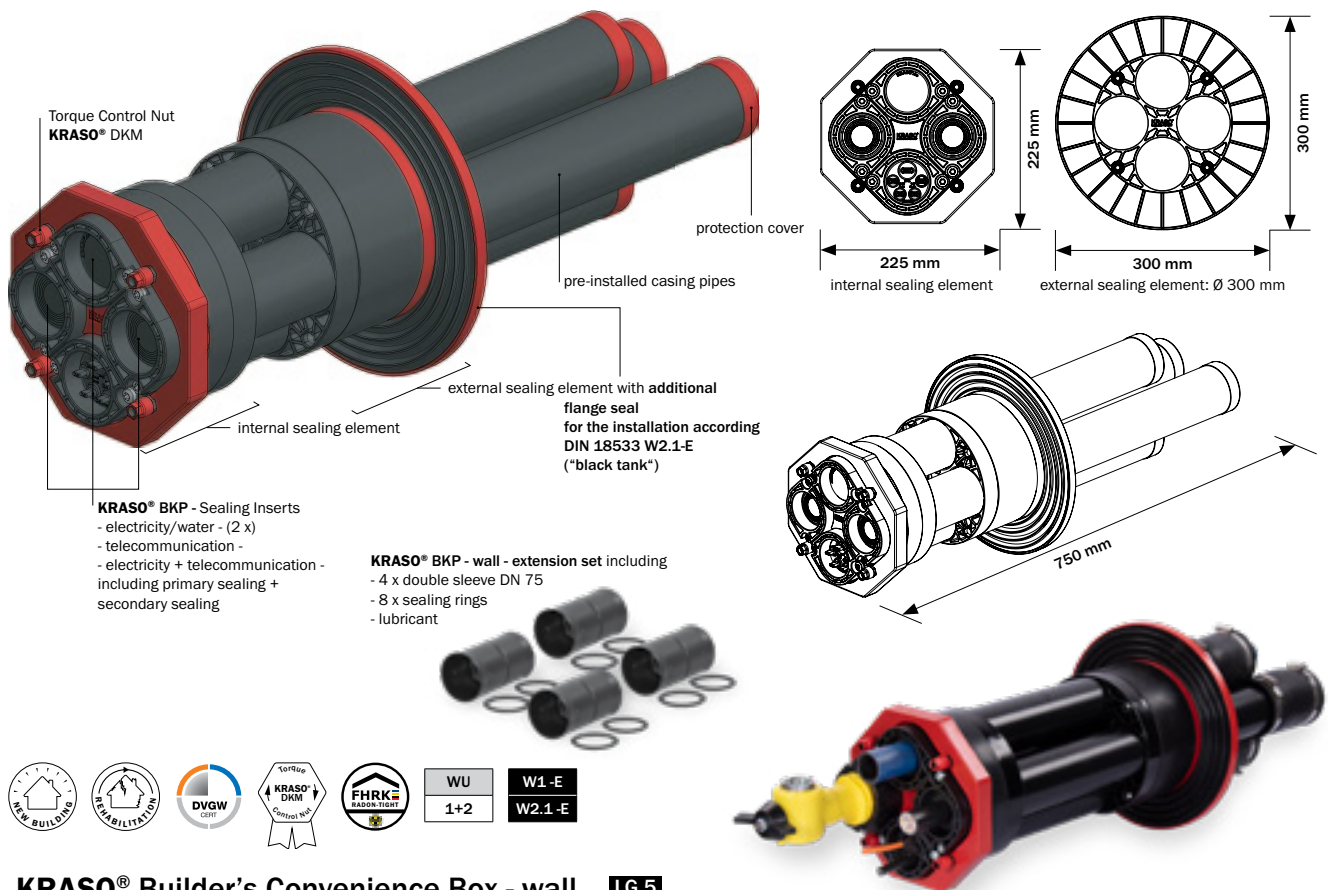
WU	W1-E
1+2	W2.1-E

KRASO® Builder's Convenience Box - wall Multi house connection for buildings with basement: gas, water, electricity and telecommunication

- + **DVGW-certified according VP 601:** overall system is gas- and water pressure tight up to 1 bar!
- + For core hole DN 200 (199 - 203 mm). **One for all: precast walls, in-situ concrete walls, casings and core holes!**
- + External sealing element with flange according **DIN 18533!** Seal: 80 mm.
- ? + **Tight in waterproof concrete structures in stress class 1** (standing or occasionally pressing water).
- + **Radon tightness IAF tested** - meets the requirements for radon precautionary areas according to FHRK leaflet MB 101! **Resistant to methane gas!**
- + Torque Control Nut **KRASO® DKM: integrated torque limiter - no torque wrench required!**
- + Split secondary sealings **for a simple installation!**
- + Ready for the network connection of gas, water, electricity and telecommunication:
Checked in accordance with DVGW! Includes **KRASO® BKP - Sealing Inserts for electricity/water, telecommunication, electricity + telecommunication.**
- + **Optional available KRASO® BKP gas installation kits:**
 - gas house connection Schuck DN 25
 - gas house connection RMA DN 25
 - gas house connection Voigt DN 25
 - gas house connection Voigt DN 32
- + Including **KRASO® BKP - wall - extension set!**
- + **DafStB waterproof concrete guideline: Stress class 1 + 2, DIN 18533 W1 -E and W2.1 -E**



KRASO® Builder's Convenience Box - wall
Here there is an installation video
(just scan in the QR-Code!)



KRASO® Builder's Convenience Box - wall **LG 5**

KRASO® Builder's Convenience Box (BKP) - wall, multi house connection for supply lines (gas, water, electricity, telecommunication) for buildings with basement, incl. installation sets for electricity/water (2 x), telecommunication, electricity + telecommunication, **KRASO®** BKP gas installation kits are available as an option | **DafStB waterproof concrete guideline: Stress class 1 + 2, DIN 18533 W1-E and W2.1-E**

Type / Item	KRASO® BKP - wall
Wall thickness from ... to ...	200 - 500 mm
Diameter core hole min ... max ...	199 - 203 mm
Whole system length	750 mm
Length x width internal sealing element	225 x 225 mm
Diameter external sealing element	300 mm
Internal diameter casing pipes	68 mm
External diameter casing pipes	75 mm
KRASO® BKP - Wand	756 €

Scope of supply:

- **KRASO®** Builder's Convenience Box - wall including
 - internal sealing element with pre-installed casing pipes incl. protective cover for the installation of supply lines like gas, water, electricity, telecommunication
 - external sealing element
- **KRASO®** BKP - wall - extension set including
 - 4 x double sleeve DN 75
 - 8 x sealing rings
 - lubricant
- installation instructions **KRASO®** Builder's Convenience Box - wall
- folding rule
- Installation kit including
 - **KRASO®** BKP - Sealing Insert - electricity/water - 2 pieces with stepless ring technology 26 - 50 mm or blind
 - primary sealing + secondary sealing for electricity/water
 - casing pipe end plugs consisting of
 - end plugs for electricity/water - split -
 - hose connection 80
 - **KRASO®** BKP - Sealing Insert - telecommunication - clamping range: 5 - 13 mm, 3 x 7 - 13 mm, 13 - 21 mm
 - primary sealing + secondary sealing for telecommunication
 - casing pipe end plugs consisting of
 - end plugs for telecommunication - split -
 - hose connection 80
- **KRASO®** BKP - Sealing Insert - electricity + telecommunication - clamping range: electricity 25 - 36 mm / telecommunication 2 x 5 - 10 mm, 3 x 7 - 14 mm
 - primary sealing + secondary sealing for electricity+telecommunication
 - casing pipe end plugs consisting of
 - end plugs for electricity + telecommunication
 - hose connection 80
 - tube of lubricant

optional available **KRASO®** BKP gas installation kits:

- **Schuck DN 25** consists of primary and secondary sealing as well as gas end plug
- **RMA DN 25** consists of primary and secondary sealing as well as gas end plug
- **Voigt DN 25** consists of primary and secondary sealing as well as gas end plug
- **Voigt DN 32** consists of primary and secondary sealing as well as gas end plug

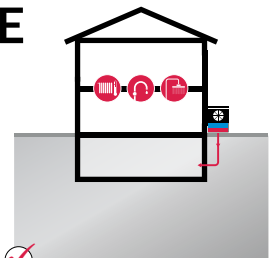
Multi house connection for buildings with basement



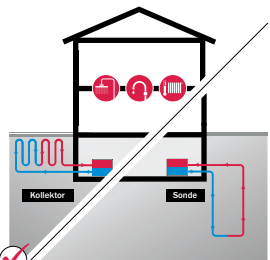
WU	W1-E
1+2	W2.1-E

KRASO® Builder's Convenience Box - wall - NFE Convenient connection to your basement: local, district or geothermal heating

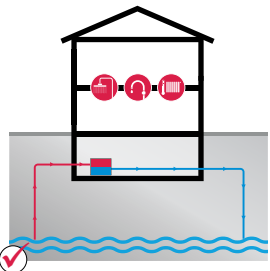
- + Connection for heat pump and local, district or geothermal heating. **With integrated supply and reflux!**
- + For heat pumps resp. local, district or geothermal heating lines with diameter 110, 90, 75, 50, 40 or 32 mm, optional available with diameter 125 mm.
- + For core hole DN 300 (299 - 303 mm). **One for all: precast walls, in-situ concrete walls, casings and core holes!**
- + **External sealing element with flange according DIN 18533!** Seal: 90 mm.
- + **Gas- and odour tight – high quality in terms of TA-Air!**
- + **Certified up to 1 bar!**
- + **Radon tightness IAF tested** - meets the requirements for radon precautionary areas according to FHRK leaflet MB 101! **Resistant to methane gas!**
- + Torque Control Nut **KRASO® DKM: integrated torque limiter - no torque wrench required!**
- + **Including all components for a secure grid connection** of heat pumps, local, district or geothermal heating, water, electricity and telecommunication!
- + Including end plugs for casing pipes - **this avoids cold bridges!**
- + **Optional available: KRASO® BKP - wall - NFE - extension set** - for cable protection pipes, **KRASO® FLS** or rigid casing pipes!
- + **DafStB waterproof concrete guideline: Stress class 1 + 2, DIN 18533 W1 -E and W2.1 -E**



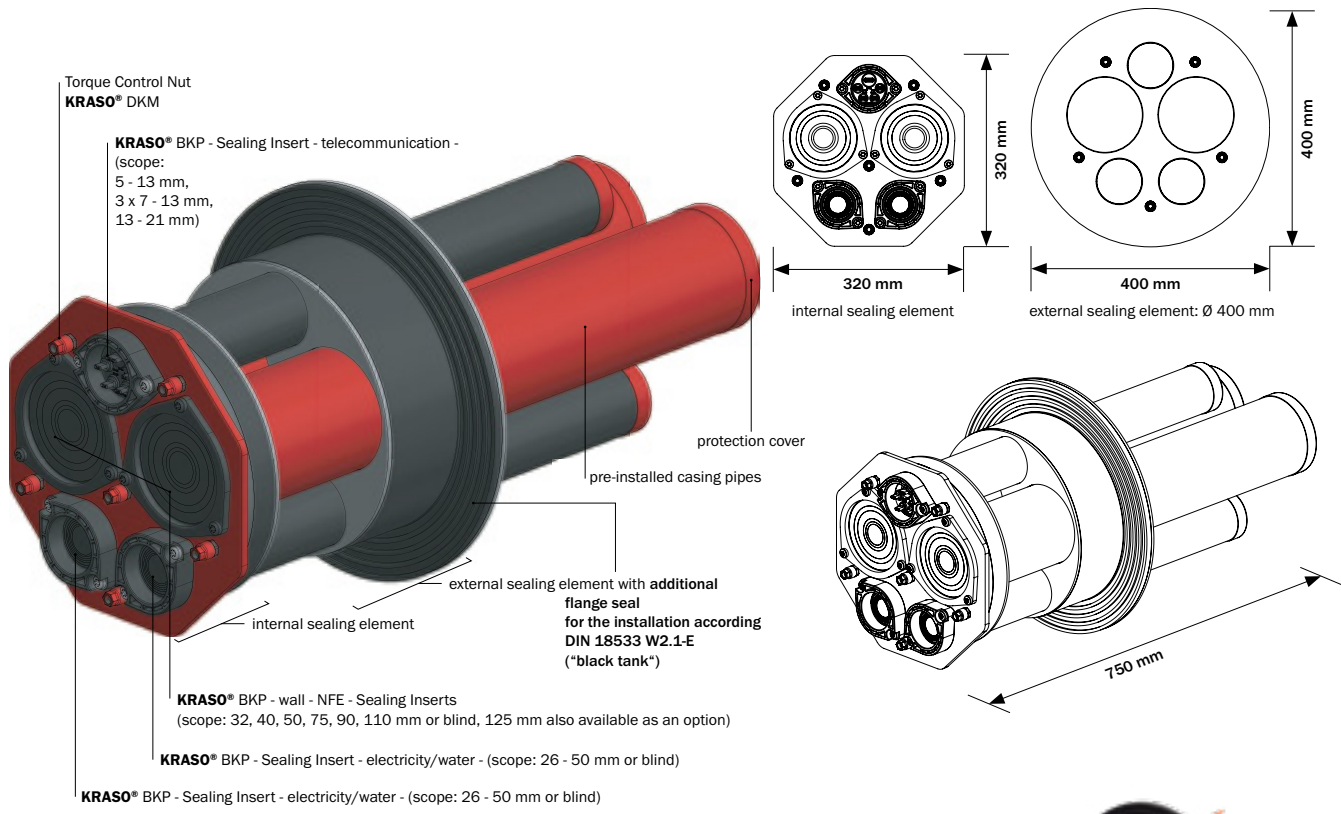
Air to water heat pump - monobloc -



Brine-to-water heat pump - collector - / - probe -



Water to water heat pump



KRASO® Builder's Convenience Box - wall - NFE **LG 5**

multi house connection for buildings with basement for supply lines (local, district or geothermal heating, water, electricity and telecommunication)
 | DafStB waterproof concrete guideline: Stress class 1 + 2, DIN 18533 W1-E and W2.1-E

Type / Item	KRASO® BKP - wall - NFE
Wall thickness from ... to ...	200 - 500 mm
Diameter core hole min ... max ...	299 - 303 mm
Whole system length	750 mm
Length x width internal sealing element	320 x 320 mm
Diameter external sealing element	400 mm
Seal width external sealing element	90 mm
Internal diameter casing pipes	68 mm
External diameter casing pipes	75 mm
Internal diameter casing pipes NFE	118 mm
External diameter casing pipes NFE	125 mm
KRASO® Builder's Convenience Box - wall - NFE	1.201 €

- Scope of supply:** KRASO® Builder's Convenience Box - NFE including
- internal sealing element with 5 casing pipes for the installation of supply lines like water, electricity, telecommunication and heat pump, local, district or geothermal heating (integrated supply and reflux) incl. protection cover
 - external sealing element
 - installation instructions **KRASO® Builder's Convenience Box - wall - NFE**
 - folding rule
 - installation kit including
 - **KRASO® BKP - wall - NFE - Sealing Insert** – 2 pieces
Scope: 32, 40, 50, 75, 90, 110 mm or blind, 125 mm also available as an option
 - primary sealing + secondary sealing NFE
 - 2 x end plug NFE
 - 2 x hose connection 125/125

- **KRASO® BKP - Sealing Insert - electricity/water** - 2 pieces with stepless ring technology 26 - 50 mm or blind
 - primary sealing + secondary sealing for electricity/water
 - casing pipe end plugs consisting of
 - end plugs for electricity/water - split -
 - hose connection 80
 - **KRASO® BKP - Sealing Insert - telecommunication** - clamping range: 5 - 13 mm, 3 x 7 - 13 mm, 13 - 21 mm
 - primary sealing + secondary sealing for telecommunication
 - casing pipe end plugs consisting of
 - end plugs for telecommunication - split -
 - hose connection 80
- Optional available:
- **KRASO® BKP - wall - NFE - extension set**



KRASO® Builder's Convenience Box - wall - ESH
Here there is an installation video
(just scan in the QR-Code!)



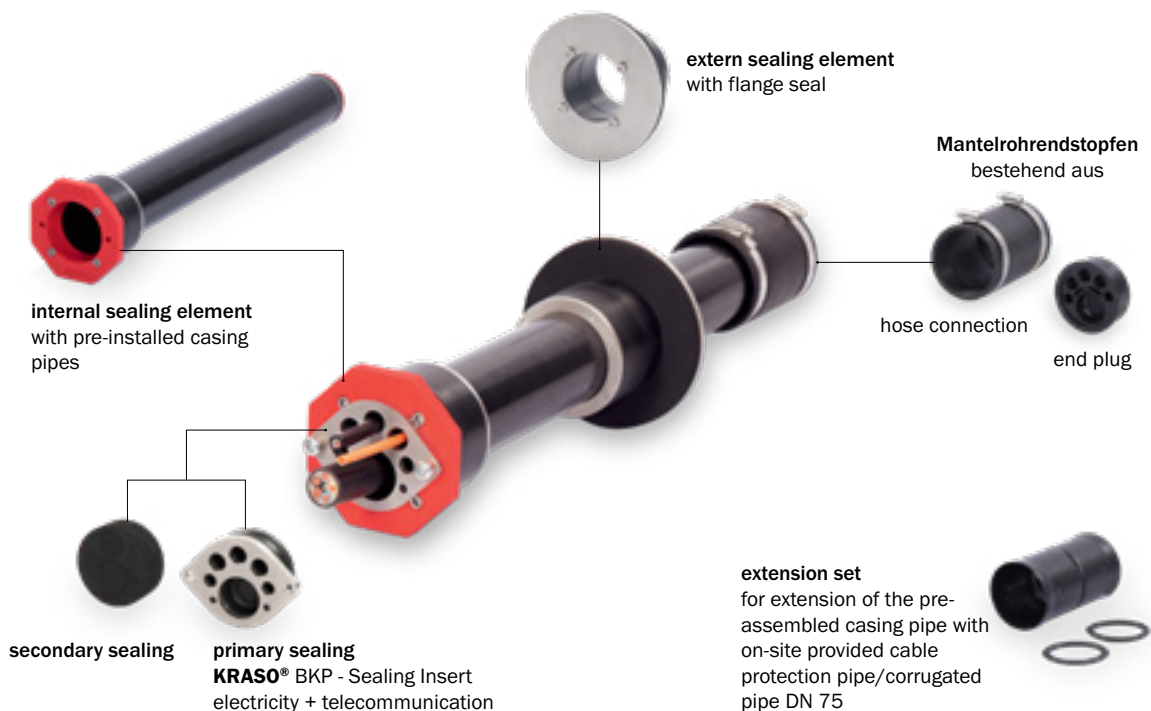
WU	W1 -E
1+2	W2.1 -E

WU	W1 -E
1+2	W2.1 -E

KRASO® Builder's Convenience Box - wall - ESH

Convenient, safe, securely attached to the network – single house connection for buildings with a basement for gas, water, electricity or telecommunication

- + Simple and safe **single-house connection for new builds and renovations** on buildings with a basement.
- + **Flexible installation:** Gas, water, electricity, telecommunication - including a suitable installation or mounting set.
- + Double installation also possible: **Electricity and telecommunication!**
- + **DVGW-certified according VP 601:** overall system is gas- and water pressure tight up to 1 bar!
- + For core hole DN 100 (99 - 103 mm). **One for all: precast walls, in situ concrete walls, casings and core holes.**
- + For wall thickness **160 – 500 mm.**
- + **Tight in waterproof concrete structures in stress class 1** (standing or occasionally pressing water).
- + External sealing element with **flange according DIN 18533!** Seal: 80 mm.
- + **Radon tightness IAF tested** - meets the requirements for radon precautionary areas according to FHRK leaflet MB 101! **Resistant to methane gas!**
- + **Gas and odour-tight – high-quality according TA-Air!**
- + **Split end plug for easy installation!**
- + **Including extension set**
- + **DafStB waterproof concrete guideline: Stress class 1 + 2, DIN 18533 W1 -E and W2.1 -E**





KRASO® Builder's Convenience Box - wall - ESH **LG 5**

(including installation set)

KRASO® Bauherren-Komfortpaket (BKP) - wall - ESH, single house connection for supply lines (gas, water, electricity or telecommunication) for buildings with basement, incl. extension set.

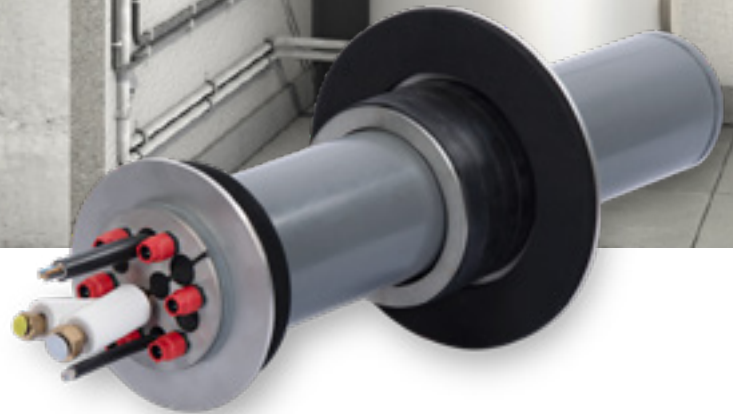
| DafStB waterproof concrete guideline: Stress class 1 + 2, DIN 18533 W1 -E and W2.1 -E

Type / Item	KRASO® BKP - wall - ESH
Wall thickness from ... to ...	160 - 500 mm
Diameter casing or core hole min ... max ...	99 - 103 mm
Whole system length	630 mm
Length x width internal sealing element	120 x 120 mm
Seal width internal sealing element	40 mm
Diameter external sealing element with flange seal	160 mm
Seal width external sealing element with flange seal	80 mm
Internal diameter casing pipe	68 mm
External diameter casing pipe	75 mm
KRASO® BKP - wall - ESH	272 €

Scope of supply: KRASO® Builder's Convenience Box - wall - ESH including

- internal sealing element with pre-installed casing pipes incl. protective cover for the installation of supply lines like gas water, electricity, telecommunication
 - external sealing element
 - installation instructions **KRASO® BKP - wall - ESH**
 - folding rule
 - **KRASO® BKP - wall - ESH - extension set** including
 - double sleeve DN 75
 - 2 x sealing ring
 - lubricant
 - **KRASO® BKP - Sealing Insert - electricity + telecommunication -** clamping range: electricity 25 - 36 mm / telecommunication 2 x 5 - 10 mm, 3 x 7 - 14 mm
 - primary sealing + secondary sealing for electricity+ telecommunication
 - casing pipe end plugs consisting of
 - end plugs for electricity + telecommunication
 - hose connection 80
 - tube of lubricant
 - **Schuck DN 25** consists of primary and secondary sealing as well as gas end plug
 - **RMA DN 25** consists of primary and secondary sealing as well as gas end plug
 - **Voigt DN 25** consists of primary and secondary sealing as well as gas end plug
 - **Voigt DN 32** consists of primary and secondary sealing as well as gas end plug
- as well as one of the following, optionally available installation sets of BKP gas installation kits:
- **KRASO® BKP - Sealing Insert - electricity/water** with stepless ring technology 26 - 50 mm or blind
 - primary sealing + secondary sealing for electricity/water
 - casing pipe end plugs consisting of
 - end plugs for electricity/water - split -
 - hose connection 80
 - **KRASO® BKP - Sealing Insert - telecommunication -** clamping range: 5 - 13 mm, 3 x 7 - 13 mm, 13 - 21 mm
 - primary sealing + secondary sealing for telecommunication
 - casing pipe end plugs consisting of
 - end plugs for telecommunication - split -
 - hose connection 80

Single house connection for buildings with basement

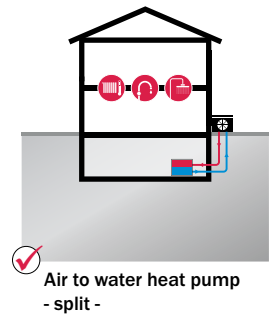


KRASO® Builder's Convenience Box - wall - SWP House connections system for air- water- heat pumps (Split)

- + Simple and safe **single-house connection** for new builds and renovations on buildings with a basement.
- + For core hole DN 150 (149 - 153 mm). **One for all: precast walls, in situ concrete walls, casings and core holes. For wall thickness 160 – 500 mm.**
- + **External sealing element with flange according DIN 18533!** Seal: 80 mm.
- + **With KRASO® Sealing Insert Type SWP** with large flange for internal fitting of the pipeline.

Scope:

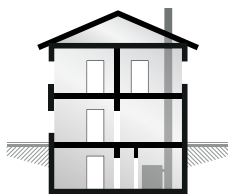
For control cables, closed:	2x	5 - 10 mm, with plug
	2x	11 - 16 mm, with plug
For refrigerant lines, split:	1x	1/4 Zoll / 6,35 mm, with plug
	1x	3/8 Zoll / 9,52 mm, with plug
	1x	1/2 Zoll / 12,7 mm, with plug
	1x	5/8 Zoll / 15,88 mm, with plug



- + **Radon tightness IAF tested** - meets the requirements for radon precautionary areas according to FHRK leaflet MB 101!
- + **DafStB waterproof concrete guideline: Stress class 1 + 2, DIN 18533 W1 -E and W2.1 -E**

Type / Item	KRASO® BKP - wall - SWP
Wall thickness from ... to ...	160 - 500 mm
Diameter casing or core hole min ... max ...	149 - 153 mm
Whole system length	630 mm
Seal width internal sealing element	30 mm
Diameter external sealing element	250 mm
Seal width external sealing element	80 mm
Internal diameter casing pipe	100 mm
External diameter casing pipe	110 mm
KRASO® BKP - wall - SWP	346 €





Scope of supply: KRASO® Builder's Convenience Box - wall - SWP incl. KRASO® Sealing Insert Type SWP with large flange

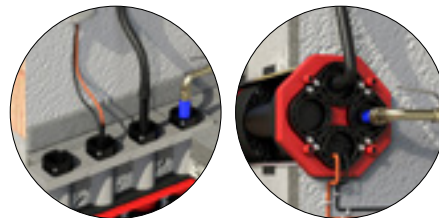


**Building
with basement**


















KRASO® Builder's Convenience Box

	- wall -	- wall - ESH	- wall - SWP	- wall - NFE																
Single-house connection system	-	✓	✓	-																
Multi-house connection system	✓	-	-	✓																
Gas	✓	✓	-	-																
Water	✓	✓	-	✓																
Electricity	✓	✓	-	✓																
Telecommunication	✓	✓	-	✓																
Local/geothermal/district heating	-	-	-	✓																
Heat pump	-	-	✓	✓																
DVGW approved in accordance with VP 601: Whole system that is gas and water pressure-tight up to 1 bar!	✓	✓	-	-																
External sealing element with sealing flange in line with DIN 18533! Seal width: 80 mm	✓	✓	✓	✓																
Gas- and odour-tight - high-quality in terms of TA-Air!	✓	✓	✓	-																
Radon-tight as tested by the IAF																				
Waterproof concrete guideline / DIN 18533	<table border="1"> <tr> <td>WU</td> <td>W1-E</td> </tr> <tr> <td>1+2</td> <td>W2.1-E</td> </tr> </table>	WU	W1-E	1+2	W2.1-E	<table border="1"> <tr> <td>WU</td> <td>W1-E</td> </tr> <tr> <td>1+2</td> <td>W2.1-E</td> </tr> </table>	WU	W1-E	1+2	W2.1-E	<table border="1"> <tr> <td>WU</td> <td>W1-E</td> </tr> <tr> <td>1+2</td> <td>W2.1-E</td> </tr> </table>	WU	W1-E	1+2	W2.1-E	<table border="1"> <tr> <td>WU</td> <td>W1-E</td> </tr> <tr> <td>1+2</td> <td>W2.1-E</td> </tr> </table>	WU	W1-E	1+2	W2.1-E
WU	W1-E																			
1+2	W2.1-E																			
WU	W1-E																			
1+2	W2.1-E																			
WU	W1-E																			
1+2	W2.1-E																			
WU	W1-E																			
1+2	W2.1-E																			
Diameter of casing or core hole	DN 200 (199 - 203 mm)	DN 100 (99 - 103 mm)	DN 150 (149 - 153 mm)	DN 300 (299 - 303 mm)																
Wall thickness in mm from ... to ...	200 - 500	160 - 500	160 - 500	200 - 500																
Whole system length in mm	750	630	630	750																
External/internal diameter of casing pipe(s) in mm	75/68	75/68	110/100	75/68 110/103.6 (NFE)																
Length x width/diameter of internal sealing element in mm	225 x 225	120 x 120	170	320 x 320																
Diameter/seal width of external sealing element in mm	300/80	160/80	250/80	400/90																
Installation set	✓	✓	✓	✓																
Scope of KRASO® BKP - Sealing Insert - electricity/water	26 - 50 mm or blind	26 - 50 mm or blind	26 - 50 mm or blind	26 - 50 mm or blind																
Scope of KRASO® BKP - Sealing Insert - telecommunication	5 - 13 mm 3 x 7 - 13 mm 13 - 21 mm	5 - 13 mm 3 x 7 - 13 mm 13 - 21 mm	5 - 13 mm 3 x 7 - 13 mm 13 - 21 mm	5 - 13 mm 3 x 7 - 13 mm 13 - 21 mm																
Scope of KRASO® BKP - Sealing Insert - electricity + telecommunication	Electricity 25 - 36 mm Telecommunication 2 x 5 - 10 mm 3 x 7 - 14 mm	Electricity 25 - 36 mm Telecommunication 2 x 5 - 10 mm 3 x 7 - 14 mm	Electricity 25 - 36 mm Telecommunication 2 x 5 - 10 mm 3 x 7 - 14 mm	Electricity 25 - 36 mm Telecommunication 2 x 5 - 10 mm 3 x 7 - 14 mm																
Scope KRASO® BKP - wall - Sealing Insert - NFE	-	-	-	32, 40, 50, 75, 90, 110 mm or blind, as an option, 125 mm is also available																
Scope of KRASO® Sealing Insert Type SWP with large flange	-	-	For control cables, closed, with plugs: 2 x 5 - 10 mm 2 x 11 - 16 mm For refrigerant lines, shared, with plugs: 1x 1/4 inch / 6.35 mm 1x 3/8 inch / 9.52 mm 1x 1/2 inch / 12.7 mm 1x 5/8 inch / 15.88 mm	-																
optionally available KRASO® BKP gas installation kits	<ul style="list-style-type: none"> • Schuck DN 25 • RMA DN 25 • Voigt DN 25 • Voigt DN 32 	<ul style="list-style-type: none"> • Schuck DN 25 • RMA DN 25 • Voigt DN 25 • Voigt DN 32 	-	-																



KRASO® BKP - Sealing Inserts **LG 5**

Installation sets for **KRASO®** Builder's Convenience Box - floor and **KRASO®** Builder's Convenience Box - wall, wall - NFE and wall - ESH: Electricity/water, telecommunication, electricity + telecommunication. Checked in accordance with DVGW!

Sealing insert consisting of		Casing pipe end plugs (optional) consisting of		
Primary sealing	Secondary sealing	End plugs	Hose connection	
 Primary sealing for electricity/water for internal installation of the electricity cable or water pipeline Clamping range: 26 - 50 mm	 Secondary sealing for electricity/water for internal installation of the electricity cable or water pipeline	 End plugs for electricity/water for external installation of the electricity cable or water pipeline	 Hose connection 90/80 for KRASO® BKP - floor - 90 for connection with the casing pipe and fitting the end plug for electricity/water - split -	 Hose connection 80 for KRASO® BKP - wall for connection with the casing pipe and fitting the end plug for electricity/water - split -
 Primary sealing for telecommunication for internal installation of the telecommunication lines Clamping range: 5 - 13 mm 3 x 7 - 13 mm 13 - 21 mm	 Secondary sealing for telecommunication for internal installation of the telecommunication lines	 End plugs for telecommunication - split - for external installation of the telecommunication lines	 Hose connection 90/80 for KRASO® BKP - floor - 90 for connection with the casing pipe and fitting the end plug for telecommunication - split -	 Hose connection 80 for KRASO® BKP - wall for connection with the casing pipe and fitting the end plug for telecommunication - split -
 Primary sealing for electricity + telecommunication for internal installation of the electricity cables and telecommunication lines Clamping range: <i>Electricity</i> 25 - 36 mm <i>Telecom.</i> 2 x 5 - 10 mm 3 x 7 - 14 mm	 Secondary sealing for electricity + telecommunication for internal installation of the electricity cables and telecommunication lines	 End plugs for electricity + telecommunication for external installation of the electricity cables and telecommunication lines	 Hose connection 90/80 for KRASO® BKP - floor - 90 for connection with the casing pipe and fitting the end plug for telecommunication - split -	 Hose connection 80 for KRASO® BKP - wall for connection with the casing pipe and fitting the end plug for telecommunication - split -

Type / Item	- Electricity/water -	- Telecommunication -	- Electricity + telecommunication
KRASO® BKP - Sealing Insert			52 €
Casing pipe end plugs (optional)			31 €

Scope of supply: as an installation set for electricity/water, telecommunication or electricity + telecommunication, **KRASO® BKP - Sealing Insert**, consisting of a primary seal and secondary seal, optionally available casing pipe end plugs consisting of end plugs and hose connector 90/80 (floor) or hose connector 80 (wall)



KRASO® BKP Floor Screed Insert
1-fold



KRASO® BKP Floor Screed Insert **LG 5**

for **KRASO®** Builder's Convenience Box - floor - 1- to 4-fold, with height fixation, protection foil and lubricant

Type / Item	1-fold	2-fold	3-fold	4-fold
KRASO® BKP Floor Screed Insert	53 €	105 €	159 €	211 €

Scope of supply: **KRASO® BKP Floor Screed Insert** with height fixation, protection foil and lubricant



KRASO® BKP gas installation kit **LG 5**

for anti-twist and tear-off protection of gas house connection, according DVGW VP 601, incl. primary and secondary sealing elements, gas end plug and self-cutting screws



Type / Item	KRASO® BKP Gas Montagesets			
Gas house connection	Schuck DN 25	RMA DN 25*	Voigt DN 25	Voigt DN 32
KRASO® BKP gas installation kit	62 €	62 €	62 €	166 €

* for rigid and flexible design

Scope of supply: KRASO® BKP gas installation kit



KRASO® BKP - wall - NFE - extension set **LG 5**

for extension of the casing pipes for water, electricity and telecommunication in the KRASO® Builder's Convenience Box - wall - NFE with a cable protection pipe provided on site



Type / Item	KRASO® BKP - wall - NFE - extension set
KRASO® BKP - wall - NFE - extension set	101 €

Scope of supply: KRASO® BKP - wall - NFE - extension set consisting of 6 x heat-shrink hose 95/25, 3 x adapter pipe DN 75,



KRASO® FLS 90 - Flexible Empty Pipe System **LG 5**

flexible empty pipe system as a cable protective hose for the extension of KRASO® Builder's Convenience Box - floor using KRASO® BKP - extension set, with a smooth interior for smooth cable pulling, and a smooth exterior for optimal sealing, flexible, enhanced pressure and vacuum resistance, high axial resistance, resistant to alkalis and acids, resistant to brine and sea water, good UV and ozone resistance, gas-tight and liquid-tight, RoHS-compliant (*Restriction of Hazardous Substances*), compression resistance 629 N, tests in line with DIN EN 61386-24 lead to the following classifications: Type 250 - Impact resistance: Normal - Classification code: N250



KRASO® FLS 90
spiral made from rigid PVC

Type / Item	KRASO® FLS 90
InternalDiameter ID in mm	80
External diameter in mm	88
Bending radius in mm	200
Weight in kg/m approx.	1,5
Material thickness in mm	4
Compression resistance	629 N
Classification according to DIN EN 61386-24	N250 (reached test force F: 364 N)
Stock length in m	30
KRASO® FLS	21 € per meter
Cutting costs*	16 €

* without discount

Scope of supply: KRASO® FLS 90